

IN THE CLAIMS:

Claims 1-2 (canceled).

¹
Claim ~~3~~ (currently amended): A laser device with an optical fiber containing a laser activating substance inside for emitting a laser beam from a distal end portion thereof, a part of said optical fiber being fixed in a dense state by an optical medium, wherein the optical medium is obtained by curing an oligomer substance so as to be changed to a polymer substance, said oligomer substance being substantially the same as said polymer substance, said polymer substance including a repeating unit represented by a general formula ^{elements} $\text{RSiO}_{1.5}$ wherein $\text{RSiO}_{1.5}$ is consisting of at least one member selected from a the group consisting of a polymethyl silsesquioxane, a polymethyl-hydride silsesquioxane, a polyphenyl silsesquioxane, a polyphenyl-methyl silsesquioxane, a phenyl silsesquioxane-dimethyl siloxane copolymer, a polyphenyl-vinyl silsesquioxane, polycyclohexyl silsesquioxane, a polycyclopentyl silsesquioxane, a polyhydride silsesquioxane, a poly(2-chloro ethyl) silsesquioxane, and a poly(2-bromo ethyl) silsesquioxane, or a mixture of said at least one member and a polysiloxane, said oligomer substance being changed to a substance containing a polymer.

²
Claim ~~4~~ (currently amended): A laser device with an optical fiber containing a laser activating substance inside for emitting a laser beam from a distal end portion thereof, a part of said optical fiber being fixed in a dense state by an optical medium, wherein the optical medium contains an amorphous silica produced by curing, said amorphous silica including a repeating unit represented by a general formula $\text{RSiO}_{1.5}$ wherein $\text{RSiO}_{1.5}$ is at least one member selected from the a group consisting of a poly(2-chloro ethyl) silsesquioxane, a poly(2-bromo ethyl) silsesquioxane, and a mixture thereof.

³
Claim ~~5~~ (previously amended): The laser device according to any of claims ¹~~3~~ and ²~~4~~, wherein the optical fiber is wound in a spiral shape or a coil-like shape.

4
Claim 6 (previously amended): The laser device according to any of claims 1, 2, 3, and 4, wherein the optical fiber is fixed in a bundled state.

5
Claim 7 (previously amended): The laser device according to any of claims 1, 2, 3, and 4, wherein a flat surface is formed on a side surface of the optical fiber such that the optical fiber is fixed in the state with the flat surface closely contacted with one another.

4
Claim 8 (previously amended): A light signal amplifying device comprising the laser device according to any of claims 1, 2, 3, and 4, having another distal end portion of the optical fiber of the laser device as an input end of a signal light, and the distal end portion as an output end of an amplified light.

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Claim 9 (new): A laser device comprising:
an optical fiber wound to form a plurality of adjacent parts; and
a bounding layer for bonding and fixing adjacent parts of the optical fiber, wherein the optical fiber further comprises:
a core containing a laser activating substance for emitting a laser beam from a distal end portion of the optical fiber; and
a clad formed around the core,
wherein the bonding layer is an organic-inorganic hybrid material that includes a repeating unit represented by a general formula $\text{RSiO}_{1.5}$, wherein $\text{RSiO}_{1.5}$ is selected from the group consisting of a polymethyl silsesquioxane, a polymethyl-hydride silsesquioxane, a polyphenyl silsesquioxane, a polyphenyl-methyl silsesquioxane, a phenyl silsesquioxane-dimethyl siloxane copolymer, a polyphenyl-vinyl silsesquioxane, polycyclohexyl silsesquioxane, a polycyclopentyl silsesquioxane, a polyhydride silsesquioxane, a poly(2-chloro ethyl) silsesquioxane, and a poly(2-bromo ethyl) silsesquioxane, or a mixture of said at least one member and a polysiloxane.

Claim ⁸10¹ (new): The laser device of claim ⁷9, wherein the organic-inorganic hybrid material forming the bonding layer has a 300 °C or higher thermal decomposition, a 1.40 to 1.56 refractive index and a transparency of 0.5 dB/cm or less loss.

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Claim ⁹11 (new): The laser device of claim ⁷9, wherein the organic-inorganic hybrid material is a polyhydride silsesquioxane wherein all organic side chains of the polyhydride silsesquioxane are methyl groups.

Claim ¹⁰12 (new): The laser device of claim ⁷9, wherein the organic-inorganic hybrid material is a polyphenyl-methyl silsesquioxane wherein the polyphenyl-methyl silsesquioxane has phenyl groups and methyl groups as side chains.
